ABSTRACT

A gyricon display containing modified particles is disclosed. The gyricon display has an arrangement of bichromal or polychromal elements which are disposed between a first and second electrode. One of the electrodes is substantially visually transparent. The display also has means for creating a potential difference between the two electrodes. Also, each bichromal element has two hemispheres, wherein one of the hemispheres has at least a surface containing at least one modified colored pigment having attached at least one organic group and the other hemisphere has at least a surface with a different color and different electrical property. The organic group preferably includes at least one ionic, ionizable group, or both. Each bichromal or polychromal element is enclosed within a shell wherein a liquid is present between the shell and the element so that the element is free to rotate in response. Methods of making the gyricon display are also disclosed.

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